

REMARKS/ARGUMENTS

This paper is submitted in reply to the Office Action dated February 17, 2004, within the three-month period for response. Reconsideration and allowance of all pending claims are respectfully requested.

In the subject Office Action, claims 1-4, 17-22, 24, 29-30, and 32-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,192,483 to Mojin et al. and U.S. Patent No. 5,590,277 to Fuchs et al.; and claims 6-7, 12-13, and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mojin et al., Fuchs et al., and U. S. Patent No. 5,748,882 to Huang. The Examiner did indicate, however, that claims 5, 8-11, 14, 16, 25-28, and 31 were directed to patentable subject matter.

Applicants respectfully traverse the Examiner's rejections to the extent that they are maintained. Applicants have amended claims 1 and 12 to correct minor grammatical errors, and have amended objected-to claims 5, 14, 16, 23 and 25 to independent form. As claims 5, 14, 16 and 23 and 25 were found to be directed to allowable subject matter by the Examiner, reconsideration and allowance of these claims are respectfully requested. Moreover, as these claims have not been narrowed, by these amendments, Applicants submit that no subject matter has been surrendered as a result of these amendments.

Now turning to the subject Office Action, and specifically to the rejection of independent claim 1, this claim generally recites a method of restarting a node in a clustered computer system, wherein the clustered computer system hosts a group that includes first and second members that reside respectively on first and second nodes. The method includes notifying the second member of the group using the first member in response to a clustering failure on the first node, and in response to the notification, initiating a restart of the first node using the second member.

The Examiner relies on the combination of Fuchs and Mojin; however, it appears that the Examiner has misinterpreted the teachings of Fuchs as applied to claim 1. Specifically, the Examiner relies on Fuchs, and in particular, the passage at col. 13, lines

Page 12 of 15
Serial No. 09/809,408
Amendment and Response dated May 17, 2004
Reply to Office Action of February 17, 2004
IBM Docket ROC920000313US1
WH&E IBM/181
K:\bm181\Amendment and Response to 2-17-04 OA.wpd

1-20, for allegedly disclosing initiating a restart of a first node using a second member on a second node, in response to detection of a failure on the first node.

It is important to note, however, that the cited passage in Fuchs does not disclose restarting a failed node or processes on a failed node. Instead, the passage discloses that, upon failure of one node, a restart is initiated for each process that was resident on the failed node, so that each process is restarted on a different, backup node. Put another way, if there is a node A having processes X, Y and Z running on the node, and node B is assigned to be a backup node for node A, a failure of node A in the Fuchs system results in processes X, Y and Z being restarted on node B, not on node A.

This interpretation is supported by Fuchs, at the passage at col. 13, lines 14-18:

In addition, the backup nodes, as indicated in column 435 of the fault tolerant process list 25, for each process that was executing on the failed node immediately prior to the detected failure should restart the respective processes. *(emphasis added)*.

The following passages at col. 13, lines 45-65 also support this interpretation, as the passage deals with what occurs after the previously failed node returns to service. From this passage, it appears that the restarting of processes occurs prior to return of a failed node to service, and as such, the most reasonable interpretation of Fuchs is that the restarting of processes occurs on backup nodes, rather than on a failing node.

As such, Applicants respectfully submit that Fuchs does not disclose "initiating a restart of [a] first node using [a] second member," when the first node is a failing node, and the second member is resident on a second node, and not on the failing node.

Likewise, Moiin does not disclose (nor does the Examiner assert that Moiin does disclose) initiating a restart of one node using a member of a group resident on a different node. As such, the combination of Fuchs and Moiin falls short of disclosing each and every element of claim 1.

Moreover, no objective evidence has been presented establishing that one of ordinary skill in the art would be motivated to modify Fuchs to initiate a restart of a node

Page 13 of 15
Serial No. 09/809,408
Amendment and Response dated May 17, 2004
Reply to Office Action of February 17, 2004
IBM Docket ROC92000313US1
WH&E IBM/181
K:\bn\181\Amendment and Response to 2-17-04 OA.wpd

using a member resident on a different node. Indeed, given that Fuchs addresses failures in processes running on a failed node by restarting those processes on different nodes, Fuchs appears to teach away from Applicants' claimed method.

Applicants therefore respectfully submit that claim 1 is novel and non-obvious over the prior art of record. Reconsideration and allowance of claim 1, as well as of claims 2-4 and 6-13 which depend therefrom, are therefore respectfully requested.

Next with respect to independent claim 15, this claim generally recites a method of restarting a node among a plurality of nodes in a clustered computer system, which includes *inter alia* selecting a second node that is different from a first, failing node to issue a start node request indicating that the purpose of the start node request is for restarting the first node. As discussed above in connection with claim 1, neither Fuchs nor Moiin discloses or suggests the initiation of a restart of a failing node through the action of a different node. In addition, the additional reference cited against claim 15 (Huang) essentially recites the same subject matter as Fuchs, and is thus directed to the concept of restarting processes from a failed node on a different node, which is conceptually different from restarting the failing node. Indeed, the portion of the abstract cited by the Examiner in connection with the rejection of claim 6 indicates that a monitor daemon resident on one node that detects the failure of a monitor daemon on a different node restarts the processes from the failed node on the same node upon which the surviving monitor node resides.

As such, Applicants respectfully submit that Huang is no more relevant than Fuchs, and thus adds nothing to the Examiner's rejection. Applicants therefore respectfully submit that claim 15 is also novel and non-obvious over the prior art of record. Reconsideration and allowance of claim 15 are respectfully requested.

Next with respect to independent claims 17, 24, 34 and 36, each of these claims recites to varying extents the concept of utilizing one node to initiate a restart of another node in a clustered computer system in response to a notification from the other node of a failure on the other node. As discussed above in connection with claim 1, neither Fuchs nor Moiin discloses or suggests this concept in combination with the other features


Page 14 of 15
Serial No. 09/809,408
Amendment and Response dated May 17, 2004
Reply to Office Action of February 17, 2004
IBM Docket ROC920000313US1
WH&E IBM/181
K:\ibm\181\Amendment and Response to 2-17-04 OA.wpd

recited in the respective claims. Accordingly, Applicants respectfully submit that claims 17, 24, 34 and 36 are also novel and non-obvious over the prior art of record.

Reconsideration and allowance of these claims, as well as of claims 18-22, 26-33, 35 and 37-38 which depend therefrom, are therefore respectfully requested.

In summary, Applicants respectfully submit that all pending claims are novel and non-obvious over the prior art of record. Reconsideration and allowance of all pending claims are therefore respectfully requested. If the Examiner has any questions regarding the foregoing, or which might otherwise further this case onto allowance, the Examiner may contact the undersigned at (513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,



Scott A. Stinebruner
Reg. No. 38,323
WOOD, HERRON & EVANS, L.L.P.
2700 Carew Tower
441 Vine Street
Cincinnati, Ohio 45202
Telephone: (513) 241-2324
Facsimile: (513) 241-6234

17 MAY 2004

Date